

This listing of claims replaces all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (canceled)
2. (new) An apparatus for wireless transmission of biological information from within a body cavity, said apparatus comprising:
  - one or more sensors detecting one or more changes in biological state within the body cavity;
  - a signal processor for converting signals from said one or more sensors into encoded data;
  - a transmitter transmitting said encoded data; and
  - a rechargeable power source which stores power sufficient to permit substantially continuous detection of changes in biological state by said one or more sensors.
3. (new) The apparatus of claim 2 wherein the body cavity is the mouth.
4. (new) The apparatus of claim 3 wherein the changes in biological state comprise undesirable tooth contact behaviors.
5. (new) The apparatus of claim 4 wherein the undesirable tooth contact behaviors comprises bruxism.

6. (new) The apparatus of claim 4 wherein the undesirable tooth contact behaviors contribute to undesirable conditions selected from the group consisting of temporomandibular joint dysfunction and myofascial pain dysfunction.
7. (new) The apparatus of claim 3 wherein said one or more sensors detects biting forces.
8. (new) The apparatus of claim 3 wherein said one or more sensors detects oral displacements.
9. (new) The apparatus of claim 2 wherein the body cavity is the rectum.
10. (new) The apparatus of claim 9 wherein the changes in biological state indicate presence of fecal material within the rectum.
11. (new) The apparatus of claim 10 wherein said one or more sensors detects resistance between two or more electrodes.
12. (new) The apparatus of claim 2 disposed in a self-contained unit having no wires that protrude outside of the body cavity.
13. (new) The apparatus of claim 2 wherein said rechargeable power source acquires power through an external power source when said apparatus is not in use.
14. (new) The apparatus of claim 2 wherein said rechargeable power source acquires power through use of solar cells.

15. (new) The apparatus of claim 2 wherein said rechargeable power source acquires power through use of electromagnetic coupling.

16. (new) The apparatus of claim 2 wherein said transmitter utilizes a crystal oscillator to allow radiowave transmission at a fixed frequency.

17. (new) The apparatus of claim 2 wherein said transmitter employs multiple stages of transceiver in order to relay said encoded data to a remote base receiver.

18. (new) A method for wireless transmission of biological information from within a body cavity, the method comprising the steps of:

detecting via one or more sensors one or more changes in biological state within the body cavity;

converting via a signal processor signals from the one or more sensors into encoded data;

transmitting the encoded data; and

employing a rechargeable power source which stores power sufficient to permit substantially continuous detection of changes in biological state by the one or more sensors.

19. (new) The method of claim 18 wherein the body cavity is the mouth.

20. (new) The method of claim 18 wherein the body cavity is the rectum.